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EXAMINER

D AGOSTA, STEPHEN M

ART UNIT PAPER NUMBER

2683

DATE MAILED: 07/16/2003

3

Please find below and/or attached an Office communication concerning this application or proceeding.

TP

Office Action Summary

Application No.

09/714,032

Applicant(s)

CAST ET AL.

Examiner

Stephen M. D'Agosta

Art Unit

2683

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7, 10, 13-16, 19-21 and 25 is/are rejected.
- 7) ☒ Claim(s) 6, 8-12, 17, 18 and 22-24 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Specification

The disclosure is objected to because of the following informalities: Pertinent information regarding a related application is blank/missing (see page 1, Cross Reference to Related Applications). **Appropriate correction is required.**

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 13 and 25 rejected under 35 U.S.C. 103(a) as being unpatentable over Ross et al. US 6,263,212 in view of Astrom US 5,579,372 (hereafter Ross and Astrom).

As per **claims 1, 13 and 25**, both Ross (figures 1 and 2) and the applicant's specification (figure 1 and page 2, L19-24 and page 3, L3-24) teach a method for a gateway connecting at least one message source and a primary message center comprising:

Transmitting a data unit associated with the message from the message source to the gateway (C1, L10-25)

But is silent on

Determining whether the message source has exceeded a threshold value associated with sending messages

Transmitting a response signal from the gateway to the message source indicating an error if the message source has exceeded the threshold value.

With further regard to claim 13, Ross is silent on:

Art Unit: 2683

- providing throttle control in a gateway between a message source and a destination message center comprising:

--Determining whether message source has exceeded a throttle control limit

--Transmitting a throttling error to the message source if the message source has exceeded the throttle control limit according to the determining step.

Ross does teach outbound (eg. Message Center to Mobile Unit) flow control (C9, L45-67 to C10, L1-15). One skilled in the art would provide for inbound flow control as well (data links, hardware, etc.). The examiner also takes **Official Notice** that flow control (and/or Quality of Service) is well known in the art and involves the ability to sense congestion and adapt communication flows based upon it (ie. increase bandwidth, use alternate routes, use alternate hardware, etc.).

Astrom teaches flow control for SMS messaging (title and abstract).

It would have been obvious to one skilled in the art at the time of the invention to modify Ross, such that flow control (throttling) is used, to provide "quality of service" for data transmission (ie. flow control, multiple message centers, etc).

Claims 2-5, 7, 10, 14-16 and 19-21 rejected under 35 U.S.C. 103(a) as being unpatentable over Ross/Astrom in view of Blonder US 5,946,299 (hereafter Blonder).

As per **claims 2 and 16**, both Ross (figures 1 and 2) and the applicant's specification (figure 1 and page 2, L19-24 and page 3, L3-24) teach claim 1/15 and message sources/gateways (s) **but are silent on** further comprising:

rejecting further messages transmitted from the message source to the gateway when the determining step indicates that the message source has exceeded the threshold value.

Ross does teach outbound (eg. Message Center to Mobile Unit) flow control (C9, L45-67) whereby a server runs multiple parallel processes capable of handling processing of SMS message (which reads on handling congestion and alternate message center(s) and transmitting to an alternate message center if congestion occurs). The examiner also takes **Official Notice** that flow control (and/or Quality of

Art Unit: 2683

Service) is well known in the art and involves the ability to sense congestion and adapt communication flows based upon it (ie. increase bandwidth, use alternate routes, use alternate hardware, etc.).

Blonder teaches determining if a primary server is congested and routing a packet/message to an alternate server along with a "rejected message" which reads on "rejecting some/all messages received at gateway for primary message center (Abstract).

It would have been obvious to one skilled in the art at the time of the invention to modify Ross, such that congestion status messages are sent and rejecting messages at the primary during flow control, to provide quality of service for data transmission.

As per **claim 3**, both Ross (figures 1 and 2) and the applicant's specification (figure 1 and page 2, L19-24 and page 3, L3-24) teach claim 2 and message source/gateway(s) **but are silent on** further comprising:

Transmitting a command status signal indicating a throttling error.

Ross does teach flow control for outbound (eg. Message Center to Mobile Unit) flow control (C9, L45-67) whereby a server runs multiple parallel processes capable of handling processing of SMS message (which reads on handling congestion and alternate message center(s) and transmitting to an alternate message center if congestion occurs). The examiner also takes **Official Notice** that flow control (and/or Quality of Service) is well known in the art and involves the ability to sense congestion and adapt communication flows based upon it (ie. increase bandwidth, use alternate routes, use alternate hardware, etc.). ***Control messages are sent to ensure that the system operates correctly.***

Blonder teaches determining if a primary server is congested and routing a packet/message to an alternate server along with a "rejected message" which reads on "rejecting some/all messages received at gateway for primary message center (Abstract). One skilled in the art realizes that control messages would be used between the different messaging centers.

Art Unit: 2683

It would have been obvious to one skilled in the art at the time of the invention to modify Ross, such that congestion status messages are sent, to provide quality of service for data transmission.

As per **claims 4 and 19**, both Ross (figures 1 and 2) and the applicant's specification (figure 1 and page 2, L19-24 and page 3, L3-24) teach claim 3/13 a method for a gateway connecting at least one message source and a primary message center (with or without flow control being present).

As per **claims 5 and 20**, both Ross (figures 1 and 2) and the applicant's specification (figure 1 and page 2, L19-24 and page 3, L3-24) teach claim 4/19 and message source/gateway(s) **but are silent on** further comprising:

Logging in the gateway all events associated with determining whether the message source has exceeded the threshold value.

The examiner takes **Official Notice** that engineers provide means for determining if a problem/event is occurring and means for recording/logging the event. This provides the engineer the ability to trouble-shoot problems, determine trends and ultimately better tune the system for optimal operation. Hardware vendors typically supply event recorders in their administrator software (eg. Microsoft's Event Viewer and Performance Monitor). The applicant refers to Cisco hardware (spec. page 71, L2) which provides the IOS to allow the administrator to control and monitor operations of the router.

It would have been obvious to one skilled in the art at the time of the invention to modify Ross, such that events are logged, to provide means for the engineer to record and review the events for troubleshooting/tuning.

As per **claims 7 and 21**, both Ross (figures 1 and 2) and the applicant's specification (figure 1 and page 2, L19-24 and page 3, L3-24) teach claim 3/15 and message source/gateway(s) **but are silent on** further comprising:

Signaling an alarm when the threshold limit is exceeded by a message source.

The examiner takes **Official Notice** that engineers provide means for determining if a problem/event is occurring and providing an alarm to the administrator. This provides the engineer the ability to carry on with normal activities UNTIL alerted to a problem condition. Hardware vendors typically supply event recorders in their administrator software (eg. Microsoft's Event Viewer and Performance Monitor) which can provide alarms to the administrator when limits are exceeded.. The applicant refers to Cisco hardware (spec. page 71, L2) which provides the IOS to allow the administrator to control and monitor operations of the router.

It would have been obvious to one skilled in the art at the time of the invention to modify Ross, such that an alarm is signaled, to provide means for automatic notification that a threshold has been exceeded.

As per **claims 10, 14 and 15**, both Ross (figures 1 and 2) and the applicant's specification (figure 1 and page 2, L19-24 and page 3, L3-24) teach claim 3/13 and message source/gateway(s) **but are silent on** further comprising:

A status signal indicating a throttling error further instructs the message source to reduce a message sending rate (claims 10 and 14).

Invoking throttle control if the message source has exceeded the throttle control limit according to the determining step (claim 15).

Ross does teach outbound (eg. Message Center to Mobile Unit) flow control (C9, L45-67 to C10, L1-15). One skilled in the art would provide for inbound flow control as well (data links, hardware, etc.). The examiner also takes **Official Notice** that flow control (and/or Quality of Service) is well known in the art and involves the ability to sense congestion and adapt communication flows based upon it (ie. increase bandwidth, use alternate routes, use alternate hardware, etc.). ***Reducing sending rate of any/all senders within the system is another way of providing quality of service and reads on the claimed limitation.***

It would have been obvious to one skilled in the art at the time of the invention to modify Ross, such that control messages are used to reduce message sending rates, to reduce contention for the bandwidth when it is congested.

Art Unit: 2683

Allowable Subject Matter

Claims 6, 8-9, 11-12, 17-18 and 22-24 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

-- Claim 6 teaches logging time, message source subject to throttle control, number of messages rejected and throttle control limit.

-- Claims 8 and 22 teaches alarm includes time, message source subject to throttle control number of messages rejected and threshold value (Claim 9 depends on claim 8 and claims 23-24 depend on claims 22/23).

-- Claims 11-12 depend on claims 9 and 11.

-- Claim 17 teaches throttle control limit is between .1 messages per second and 500 messages per second (claim 18 depends on claim 17).

Ross does not disclose the above limitations.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

1. Lorello et al. US 6,459,904 teaches SMS between multiple MSC's
2. Hult et al. US 5,822,700 teaches flow control of SMS messages
3. Gleason US 5,96,63 teaches messages and messaging centers.
4. Tett US 5,635,918 teaches message delivery in wireless devices.
5. Stein et al. US 6,289,212 teaches email during network unavailability.
6. Sriram US 5,463,620 teachers bandwidth allocation/congestion avoidance.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen M. D'Agosta whose telephone number is 703-306-5426. The examiner can normally be reached on M-F, 8am to 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bill Trost can be reached on 703-308-5318. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist on 703-306-0377.

SMD

[Signature]
7-9-03

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